What is Claimed is:

1. An analytical method comprising determining whether or not a nuclear magnetic resonance spectrum taken from a sample of dichloroacetic acid includes a a nuclear magnetic resonance peak associated with a CH proton of chloral hydrate.

2. The method of claim 1 further comprising comparing an integral of said nuclear magnetic resonance peak associated with said CH proton of chloral hydrate with an integral of a nuclear magnetic resonance peak associated with at least one proton of said dichloroacetic acid.

3. The method of claim 2 further comprising calculating a concentration of chloral hydrate in said dichloroacetic acid based upon said comparison of integrals of nuclear magnetic resonance peaks.

4. The method of claim 3 wherein the calculated concentration of chloral hydrate is less than 15 ppm.

5. The method of claim 3 wherein the calculated concentration of chloral hydrate is less than 10 ppm.

6. The method of claim 3 wherein the calculated concentration of chloral hydrate is less than 1 ppm.

7. The method of claim 1 further comprising:

adding at least one organic solvent to said sample; and

comparing said nuclear magnetic resonance peak associated with said CH proton of chloral hydrate with a nuclear magnetic resonance peak associated with at least one proton of said at least one organic solvent.

8. The method of claim 7 wherein the organic solvent is toluene.

9. The method of claim 7 further comprising calculating a concentration of chloral hydrate in said dichloroacetic acid based upon said comparison of integrals of nuclear magnetic resonance peaks.

10. The method of claim 9 wherein the calculated concentration of chloral hydrate is less than 15 ppm.

11. The method of claim 9 wherein the calculated concentration of chloral hydrate is less than 10 ppm.

12. The method of claim 9 wherein the calculated concentration of chloral hydrate is less than 1 ppm.

13. The method of claim 1 further comprising contacting an oligonucleotide that bears at least one protecting group with said dichloroacetic acid.

14. The method of claim 13 wherein said contacting effects removal of said at least one protecting group from said oligonucleotide.

15. The method of claim 14 wherein said oligonucleotide from which said protecting group has been removed does not include a group having formula $5'\text{-O-CH(OH)(CCl}_3)$.

16. The method of claim 14 wherein said oligonucleotide from which said protecting group has been removed does not include a group having formula $5'\text{-O-CH(CCl}_3)\text{-O-}$.

17. The method of claim 10 wherein said dichloroacetic acid is used as a deprotecting agent in an oligonucleotide synthesis.

18. The method of claim 17 wherein said oligonucleotide has the formula:

d(TpCpCpGpTpCpApTpCpGpCpTpCpCpTpCpApGpGpGp); wherein P = $P(O)S^- Na^+$.

19. The method of claim 11 wherein said dichloracetic acid is used to remove hydroxyl protecting groups in an oligonucleotide synthesis of an oligonucleotide.

20. The method of claim 19 wherein said oligonucleotide is of the formula:

d(TpCpCpGpTpCpApTpCpGpCpTpCpCpTpCpApGpGpGp); wherein P = $P(O)S^- Na^+$.

21. The method of claim 12 wherein said dichloracetic acid is used to remove hydroxyl protecting groups in an oligonucleotide synthesis.

22. The method of claim 21 wherein said oligonucleotide is of the formula:

d(TpCpCpGpTpCpApTpCpGpCpTpCpCpTpCpApGpGpGp); wherein P = $P(O)S^- Na^+$.

23. The method of claim 21 wherein said oligonucleotide does not include a group having formula 5'-O-CH(CCl_3)-O-.

24. A solvent that comprises dichloroacetic acid in an amount greater than about 50% by weight and is substantially free of chloral hydrate.

25. The solvent according to claim 24 that includes less than 15 ppm chloral hydrate.

26. The solvent according to claim 24 that includes less than 10 ppm chloral hydrate.

27. The solvent according to claim 24 that includes less than 1 ppm chloral hydrate.

28. An oligonucleotide that is substantially free of chloral hydrate adducts.